



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,676	02/25/2002	Charles Edward Anderson IV	1875.1980000	2892
26111	7590	12/23/2005		
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER VAUGHN JR, WILLIAM C	
			ART UNIT 2143	PAPER NUMBER

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/080,676

Applicant(s)

ANDERSON ET AL.

Examiner

William C. Vaughn, Jr.

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-28 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-28 and 30-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Action is in regards to the Amendment and Response received on 29 September 2005.

#### ***Response to Arguments***

2. Applicant's arguments and amendments filed on 29 September 2005 have been carefully considered but they are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment to the claims which significantly affected the scope thereof. Applicant is also advised to contact the examiner in regards to discussion of details that would possibly move the application forward [see pages 20 and 21 of the enabling portions of Applicant's specification].

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 12, 17-19, 24 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eicon (WO 00/27092 EICON Technology Corporation) in view of Huitema, U.S. Patent No. 6,016,512.
5. Regarding claim 1, Eicon discloses the invention substantially as claimed. Eicon discloses a method for caching domain name system information in a network gateway (Figure 1

Art Unit: 2143

element 10) that includes a customer premises equipment interface (Figure 1 element 12), a network interface (Figure 1 element 20), and a cache (Figure 1 elements 15 and 16) for storing domain names and corresponding IP addresses, comprising: receiving a domain name system query from a customer premises equipment over the customer premises equipment interface, said query including an unresolved domain name (page 4, lines 1-11). Eicon teaches requests for numeric address in response to a domain name. Eicon teaches such requests as arriving from CPE, which are identified as "stations (page 7 lines 14-16); determining if said unresolved domain name is stored in the cache (page 7 lines 14-27). Eicon teaches lists of domain names and their corresponding IP addresses stored within the cache; if said unresolved domain name is stored in the cache, obtaining an IP address corresponding to said unresolved domain name from the cache, generating a response to said query that includes said IP address corresponding to said unresolved domain name, and providing said response to the customer premises equipment interface for transmission to said customer premises equipment (Page 9 lines 11-14); and if said unresolved domain name is not stored in said cache, providing said query to the network interface for transmission to a network for resolution of said query (page 5 lines 4-11, page 8 lines 3-8). However, Eicon does not explicitly disclose loading the cache with a preliminary set of domain names and corresponding IP addresses as well as wherein the preliminary set of domain names and corresponding IP addresses represent a selected set of addresses to which the customer premises equipment is entitled to have access.

6. In the same field of endeavor, Huitema discloses (e.g., enhanced domain name service). Huitema discloses loading the cache with a preliminary set of domain names and corresponding IP addresses as well as wherein the preliminary set of domain names and corresponding IP addresses represent a selected set of addresses to which the customer premises equipment is entitled to have access (Huitema teaches

Art Unit: 2143

having caching servers that have different data sets of DNS names as well as addresses), [see Huitema, Col. 3, lines 44-67].

7. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Huitema's teachings of an enhanced domain name service with the teachings of Eicon for the purpose of increasing the efficiency in processing DN queries for connecting local computers to remote computers [see Huitema, Col. 2, lines 16-25].

8. Claim 17 is for a network gateway that corresponds to claim 1, and is therefore similarly rejected.

9. Claim 27 is for a computer program product that corresponds to claim 1, and is therefore similarly rejected.

10. Regarding claims 2, 12, 18, 24 and 28, Eicon-Huitema discloses receiving a domain name system response from said network over the network interface, said response including a response domain name and an IP address corresponding to said response domain name; storing said response domain name and said IP address corresponding to said response domain name in the cache; and providing said response to the customer premises equipment interface for transmission to said customer premises equipment (page 5 lines 4-11, page 8 lines 1-8). Eicon teaches external DNS returning IP addresses to the gateway and the gateway making new entries into its cache using the returned DNS information. Eicon teaches the gateway returning a reply from the external DNS to the CPE (identified as a "station" or "device" see page 9 lines 11-12).

Art Unit: 2143

11. Regarding claim 19, Eicon discloses said customer premises equipment interface is a home phonline network interface, an Ethernet interface, or a Universal Serial Bus interface (page 6 lines 3-5). Eicon teaches an Ethernet interface to a LAN, said LAN constituting customer premises equipment.

***Claim Rejections - 35 USC § 103***

12. Claims 16, 26, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eicon in view of Huitema.

13. Regarding claims 16, 26 and 32, Eicon discloses the invention substantially as claimed. Eicon discloses receiving a domain name system response from said network over the network interface (as noted in claims 2, 12, 18, 24 and 28 above); if said response includes a response domain name and an IP address corresponding to said response domain name, storing said response domain name and said IP address corresponding to said response domain name in the cache (as noted in claims 2, 12, 18, 24 and 28 above); and providing said response to the customer premises equipment interface for transmission to said customer premises equipment (as noted in claims 2, 12, 18, 24 and 28 above). However, Eicon does loading the cache with a preliminary set of domain names and corresponding IP addresses as well as wherein the preliminary set of domain names and corresponding IP addresses represent a selected set of addresses to which the customer premises equipment is entitled to have access as well as if said response does not include a response domain name and an IP address corresponding to said response domain name, providing said response to the customer premises equipment interface for transmission to said customer premises equipment without storing any information in the cache.

14. In the same field of endeavor, Huitema discloses (e.g., enhanced domain name service). Huitema discloses loading the cache with a preliminary set of domain names and corresponding IP addresses as well as wherein the preliminary set of domain names and corresponding IP addresses represent a selected

Art Unit: 2143

set of addresses to which the customer premises equipment is entitled to have access (Huitema teaches having caching servers that have different data sets of DNS names as well as addresses), [see Huitema, Col. 3, lines 44-67].

15. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Huitema's teachings of an enhanced domain name service with the teachings of Eicon for the purpose of increasing the efficiency in processing DN queries for connecting local computers to remote computers [see Huitema, Col. 2, lines 16-25].

16. Eicon does teach determining if a DNS request fails, and in response to that failure, sending the request to a different external DNS (page 9 lines 16-23). It would have been obvious that the invention of Eicon does not store any information in the cache when the response does not contain a response domain name and an IP address corresponding to said response domain name as Eicon teaches the sending of a subsequent request to a different DNS. It would have been further obvious to provide the response to the customer premises equipment interface as it is known in the art to provide responses without IP addresses when such DNS requests result in an error condition (see RFC 1035).

***Claim Rejections - 35 USC § 103***

17. Claims 4 and 5 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eicon-Huitema as applied to claim 1 above, and further in view of Mogul (US 6,262,987).

18. Regarding claim 4, Eicon-Huitema discloses the invention substantially as claimed. However, Eicon-Huitema does not specifically enumerate the loading is initiated by an entity on the network interface.

Art Unit: 2143

19. In the same field of endeavor, Mogul discloses the loading is initiated by an entity on the network (column 5 lines 8-29 where the "collecting site" is the network entity).

20. Accordingly, it would have been obvious to combine the loading of the table of Mogul with the cache of Eicon in order to gain the advantage of reduced latencies associated with translating name-address bindings as taught by Mogul.

21. Regarding claim 5, Eicon-Huitema and Mogul discloses the loading is initiated by the customer premises equipment (column 7 lines 21-26 where the "collecting site" is a customer premises equipment).

***Claim Rejections - 35 USC § 103***

22. Claims 6, 7, 9, 10, 13, 14, 22, 23, 25, 30, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eicon-Huitema as applied to claims 1, 2, 12, 17, 18, 24, 27 and 28 above, and further in view of Buckman (US 2003/0012147 A1).

23. Regarding claims 6, 9, 13, 22, 23, 25, 30, 31 and 33, Eicon-Huitema discloses the invention substantially as claimed. However, Eicon-Huitema does not specifically enumerate continuously monitoring packets to identify domain names system queries and responses, however Eicon does teach packets being received by the CPE interface and the network interface (page 6 lines 7-17).

24. In the same field of endeavor, Buckman discloses continuously monitoring packets received by a network node to identify domain name system queries and responses (paragraph 0023, where the classify engine of the node monitors and classifies packets, paragraph 0027, where the classify engine monitors DNS requests and responses).



Art Unit: 2143

25. Accordingly, it would have been obvious to combine the monitoring and identifying of Buckman with the packet traffic of Eicon in order to gain the advantage of readily recognizing communications between local users on a LAN and also forwarding requests for external network addresses and keeping an up to date list of DNS replies as taught by Eicon.

26. Regarding claims 7, 10 and 14, Eicon-Huitema and Buckman discloses examining a protocol header field of said packets received by the customer premises equipment interface from said customer premises equipment and by the network interface from said network to identify domain name system messages (paragraph 0023).

***Claim Rejections - 35 USC § 103***

27. Claims 8, 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eicon-Huitema and Buckman as applied to claims 7, 10 and 14 above, and further in view of RFC 1035 (Domain Names — Implementation and Specification; Mockapeteris, P).

28. Regarding claims 8, 11 and 15, Eicon-Huitema and Buckman discloses the invention substantially as claimed. However, Eicon-Huitema and Buckman does not specifically enumerate examining a parameter field of said domain name system messages received by the customer premises equipment interface from said customer premises equipment and by the network interface from said network to identify domain name system queries and responses.

29. In the same field of endeavor, RFC 1035 teaches a parameter field, "QR", as a part of the DNS message header, where the value in the "QR" field identifies the DNS message as a query or a response (4.1.1 Header Section Format).

Art Unit: 2143

30. Accordingly, it would have been obvious to combine the examination of the header as taught by Buckman (as noted in claims 7, 10 and 14 above) with the parameter field as taught by RFC 1035 in order to gain the advantage of distinguishing DNS queries from DNS responses as taught by RFC 1035.

***Claim Rejections - 35 USC § 103***

31. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eicon-Huitema as applied to claim 17 above, and further in view of Kasser (Practical Internet; Kasser, Barbara).

32. Regarding claim 20, Eicon-Huitema discloses the invention as claimed. However, Eicon-Huitema does not specifically enumerate said network interface comprises a cable modem system interface.

33. Eicon does teach an ISDN network interface (Figure 1 element 20). Kasser teaches a cable modem and further teaches that cable modems are similar to ISDN, both offering digital connections (p 43). It would have been obvious to combine the cable modem interface of Kasser with the modem of Eicon because they are similar as taught by Kasser, and further to gain the advantages of a fast connection as taught by Kasser.

***Claim Rejections - 35 USC § 103***

34. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eicon as applied to claim 17 above, and further in view of Perry (Sams Teach Yourself PCs in 24 Hours; Perry, Greg M.).

Regarding claim 21, Eicon-Huitema does not specifically enumerate said memory comprises an SDRAM. Perry discloses SDRAM (pages 72 and 431). It would have been obvious to combine the SDRAM of Perry with the modem of Eicon in order to gain the advantages of newer and faster memory as taught by Perry.

*Conclusion*

35. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

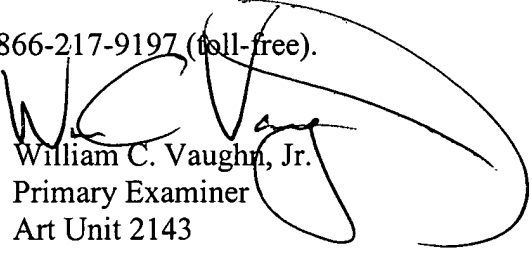
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vaughn, Jr. whose telephone number is (571) 272-3922. The examiner can normally be reached on 8:00-6:00, 1st and 2nd Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2143

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William C. Vaughn, Jr.  
Primary Examiner  
Art Unit 2143  
21 December 2005

WCV